

# DIPPERS DIGEST

Canadian Naval Divers  
Association

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15 June 2002

## Royal Australian Navy Clearance Divers 50 Years Old

50 Years of Clearance Divers in the RAN submitted by Glenn Spilsted OAM, WOCD, Chief Instructor Diving School, HMAS PENGUIN

This year sees the 50th anniversary since the inception of the Clearance Diving Branch in the Royal Australian Navy. In those fifty years a lot of water has flowed under the bridge and the Clearance Diver has truly made a name for them selves both world wide and within the RAN.

The first record of Diving in Australian Waters was in 1629 when Dutch Divers from the SARDAM dived on the wreck of the BATAVIA on the reef of ABROLHOS Islands. Three Hundred and Thirty-Three years later Divers from our own RAN Clearance Diving Branch experienced the same dive, albeit as a task oriented team of highly trained professionals.

The Clearance Diving Branch has evolved into a dynamic array of individuals with specialist skills that are considered world class within their field.

During the nationalistic days when the mother country set the standard, much of the RNs equipment, regulation, pay and organization was adopted. Responsibility for Diving was vested in the Gunnery Branch at HMAS CERBERUS and the first trainees were recorded in 1913. These classes trained in Siebe Gorman Standard Diving Dress and Hall Rees Shallow Divers Dress.

In 1929 the first course moved north to Sydney and began in HMAS Penguin, which was alongside at Garden Island. From this period Sydney became the home of the Clearance Diving Branch, as they carried out examinations of underwater fittings, clearing inlets, searches and underwater maintenance.

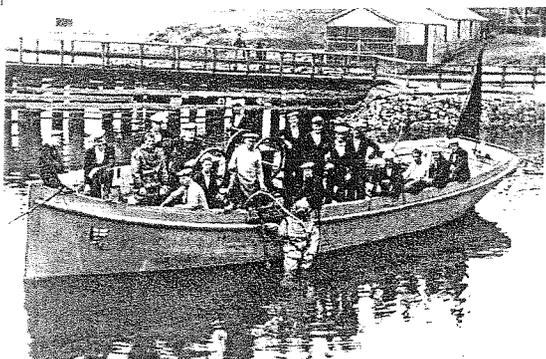
In 1946 the responsibility for diver training moved to the Torpedo Branch and was conducted at HMAS PENGUIN. Equipment and training did not vastly change until the outbreak of the Second World War.

The War changed the face of what Clearance Diving is today, as explosives, the advent of aircraft, and surface influence mines became a formidable technology. Rendering influence mines safe underwater was a major role that the teams carried out post - 1946. Render Mine Influence Teams deployed North, utilizing new equipment developed to allow divers to conduct ship hull searches and additionally destroy the tonnes of enemy ordnance that remained. These



functions continue today.

In 1947 the decision was made to transfer the training of divers to HMAS RUSHCUTTER whereby diving still continued in the Standard Diving Dress, Shallow Waters Diving Dress Salvus and Gas Mask. In 1951 the decision was made to form the Clearance Diving Branch, as we know it today with the first course qualifying in September 1955 on the RN Clearance Diving Breathing Apparatus. Standard Div-



### CNDA

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HALIFAX, NS 1981

#### FOUNDING MEMBERS

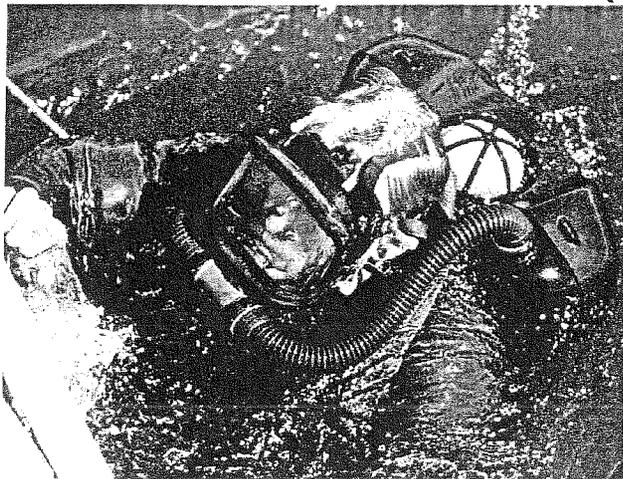
Glenn Adams P. Eng  
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## RAN Clearance Divers (Cont)



ing Dress was formally retired. Since the Branches inception, as well as their usual role, the teams have been involved in aircraft and ships salvage, body recoveries, aid to the civil community and have been members of the SAS Counter Terrorist Teams. They have seen front line action in Vietnam where their six man teams were responsible for searching over 7,000 ships whereby 78 limpet mines were removed. The VC placed \$10,000 bounties on each of their heads as their successes undermined the enemy's terrorist acts.

In 1991 during Operation Damask/Desert Storm the Branch also had the opportunity to put it's hard training to good use. Based in Bahrain they were on stand-by with the US Marines to clear beaches for the planned US Amphibious Assault. They were responsible for clearing four of the Kuwaiti major ports to enable shipping to provide vital food and water supplies to the devastated country. In doing this, over 2 million square metres of seabed was searched and 60 sea mines where destroyed.

Operational Detachments closer to home became a reality in 1999 when Australian Clearance Diving Teams One and Four deployed to East Timor to assist in Operation WARDEN-STABALISE. This support varied from surveying sites, to disposing to thousands of items of ordnance and weaponry. The many roles that were carried out, including clandestine beach reconnaissance, were integral to the successes of ADF amphibious operations. Today through their continual professionalism and dedication, the Clearance Diving Branch is recognised worldwide as leaders in Mine Counter measures and Beach Reconnaissance.



## RAN - The Clearance Diver Today

### Training

Diving training in the RAN commenced at Chowder Bay in 1942. Divers were billeted and accommodated at the newly established naval depot HMAS PENGUIN. Training was on a small scale and by 1948 the total number of trained divers was 22. It was not until 1955 that the first Clearance Diver course commenced at HMAS RUSHCUTTER.

Today HMAS PENGUIN is located on the shore of Hunter Bay about 1.5 miles west of the entrance to Sydney Harbour. PENGUIN is the only establishment where initial diving training may be carried out.

Training is carried out in accordance with the RAN training system, the philosophy of which is to train to a specific task. In order to achieve this, the course is divided into phases and each phase is sub-divided into modules. The student has to pass training objective tests in each module and if he totals three failures he will invariably be removed from course. In addition the student is subject to the process of continual behavioural assessment whereby he can be counselled on his progress and assisted in rectifying any problems.

The physical side of training is very demanding and students are purposefully put under stress to assess their suitability as CDs, and it is not unusual to work 2 -3, 20 hr days in succession.

The largest throughput is the scuba air divers because of the continual demand from the fleet. 17 courses are conducted a year with a maximum of 14 per course. Duration of the course is three weeks. Ships divers are trained to a maximum depth of 20m and their training includes medical lectures, diving drills, seabed and ships bottom searches, during which they obtain 800-1000 minutes diving time per course.

The Basic CD's course is 30 weeks duration; during which the student obtains 90-100 hours in the water. The school is currently running three courses annually which produces approximately 30 new CD's a year.

Divers are trained to dive in the following pieces of equipment.

- LARVI -An automatic demand, closed circuit, pure oxygen set

designed primarily to be used in a clandestine role.

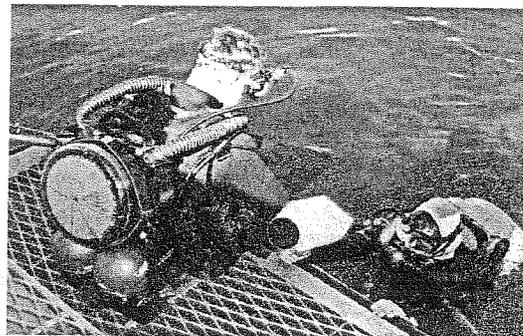
- A5800 -A closed circuit mixed gas, constant partial pressure breathing set. It recirculates and scrubs CO<sub>2</sub>

from the diver's respiratory gas. Oxygen levels are automatically controlled by a computer and is mixed with a diluent gas to maintain a constant PPO<sub>2</sub> regardless of depth. The set has an extremely low acoustic and magnetic signature and is designed to be used in a MCM environment.

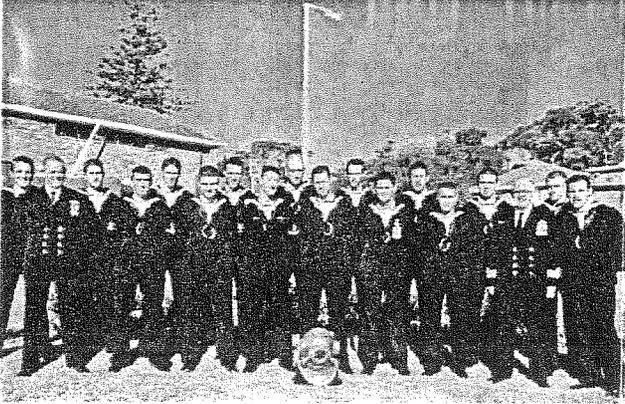
- Surface Supplied Breathing Apparatus - A surface gas supply is delivered to divers through an umbilical to either a Kirby Morgan Mk 17b helmet or Mk 18 band mask. The set is particularly suited to static work underwater and tasks where long endurance are reasonably likely and there is a requirement for good communications.
- SCUBA Air Breathing Apparatus -A self contained, open circuit breathing apparatus used for routine work such as inspection of ship's bottoms and recovery of lost objects. The endurance of this set is limited.

The Diving School is also responsible for the training of all the RAN's explosive ordnance disposal and demolition techniques. This includes the rendering safe and disposal of items such as land and sea mines, rockets, missiles, bombs, projectiles and sub munitions.

### Force Element Group



## RAN - The Clearance Diver Today (Cont)



The RAN has two operational Australian Clearance Diving Teams (AUSCDTs) which incorporate local Australian Naval Reserve (ANR) divers. AUSCDT ONE is based at HMAS WATERHEN in Sydney and AUSCDT FOUR is based at HMAS STIRLING in Western Australia.

The AUSCDTs are under the operational command of the Maritime Commander Australia. Administrative control is delegated to Commander Australian Naval Mine Warfare and Clearance Diving Group (COMAUSNA VMCDGRP).

AUSCDTs ONE and FOUR have an identical structure that is organized into four Task Elements capable of deploying separately or in combination with the other elements.

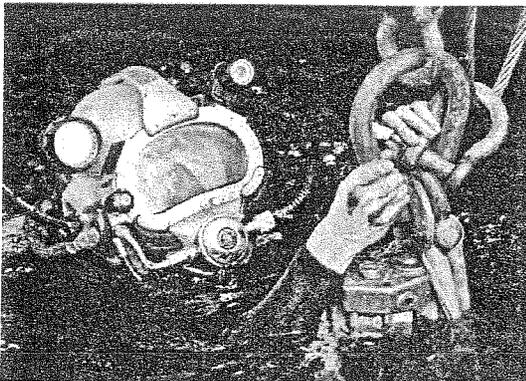
### AUSCDT Head Quarters (AUSCDT HQ) Element

The AUSCDT HQ comprises of Command, Communications, Support, Logistics and maintenance personnel and, depending upon the nature of the deployment or operation, will consist of approximately ten personnel and can be staged ashore or from a suitable surface platform.

### Mine Counter Measures (MCM) Element

MCM Operations include:

- location and disposal of sea mines in shallow waters,
- rendering safe and recovering enemy mines,
- the search for and disposal of ordnance below the high water mark, and



- clearance of surface ordnance in port or on naval facilities

### Maritime Tactical Operations (MTO) Element

The MTO element Very Shallow Water Mine Countermeasures missions include:

- clandestine hydrographic survey of an amphibious beach,
- clandestine clearance or demolition of sea/landmines and/or obstacles, and
- clandestine placement of charges, demolitions for the purpose of diversion or demonstration.

### Underwater Battle Damage Repair

UBDR Element's wartime role is to effect temporary underwater repairs to Fleet units utilizing patching, plugging, and a limited underwater cutting and welding capability. UBDR Elements train for their wartime role by performing Fleet support tasks that include underwater fitting, stabilizer and propeller maintenance and replacement and a limited salvage capability.

### Explosive Ordnance Disposal (EOD)

Rendering safe and disposal of all explosive ordnance including Improvised Explosive Devices is a core skill across all AUSCDT Elements.

### AUSCDT ONE & AUSCDTFOUR

PNF Ship's Company	5 Officers, 52 Sailors
ANR Ship's Company	25 Sailors
Weapons and Tools Small Arms	40 F88 5.56 mm Steyr
	4 F89 5.56 mm Minimi

### EOD/IEDD Render Safe Tools

### HUON Class Minehunters

The RAN will have six of these Mine Countermeasure vessels. Each ship is complemented with a team of seven divers who make up a formidable part of the ship's weapon system. Their operational responsibilities include the location, neutralization and disposal of sea mines.



## Social Page

May 7<sup>th</sup> Don Deane received a disturbing call from Andy Ouellette in Honolulu. He said that Sharon was in hospital and had been diagnosed as having Leukemia and that the prognosis wasn't too good. He said she was in the Queen Emma hospital in Honolulu. June 4<sup>th</sup> Sharon had a rough month of chemotherapy but she is coming home today. Sharon will be home till her next treatments. Andy and Sharon can be reached at: 851 SOUTH KIHEI, KIHEI HI, USA 96753. Her Email is [res017pb@verizon.net](mailto:res017pb@verizon.net)

Sharon and Andy, our hope and prayers are on a full recovery. Thank you Lou Haynes and Diane Clark for keeping all their friends in the picture.

LCdr Laing is retiring 19 Dec 02 (CRA). He joined the CF 03 Dec 70 and became a CD 75-76. With numerous posting in the diving community/CF, his wife intends them to retire in the Halifax area. FDU(A) intends to hold a function for Bill 6 June 02 1830-2300 at the Shearwater yacht club.

## Correspondence

Moe Coulombe wrote (March): Just got back from a trip to CNDA South where we joined the Deane's and McRae's to help celebrate Tom Kelly's 75th birthday. Good time was had by all. Panama City hasn't changed that much and there was a good crowd on the beach at school break as well as in the Oyster Bar near Tom's. Met a few old working cohorts from NEDU and got to meet a lot of neighbours from my exchange duty time. Don Deane is up here this week curling with me in a bonspiel in Campbell River. Finish up on Thursday and then that will be the end of the season for us so it's off to the golf course and put the boat out on the water then fish, fish, fish. Moe can be reached at (250)337-5466 or D2-2157 Regent Road, Black Creek, BC.

Bruce Robinson has moved to #33 - 3049 Brittany Dr., Victoria, BC V9B 5P8 (250)474-2474

ALOHA ! The Wilson's are moving. Effective Apr 26th we are moving from the slopes of Haleakala to the sunnier end of the Island to take up residence in Wailea. Closer to work and more importantly "Beaches and Golf". Our new address: 3950 Kalai Waa Dr. #K101, Wailea, Hawaii, 96753, (808) 875-4265

Jack Cribb wrote: Enjoyed your screed when you came back from Aussieland, having done a 31 day tour over there with our Canadian Naval Air group (CNAG) a few years back. I took my Ships Divers course in 1962, Red Larsen as my Instructor and Colin Drew as Chief, I was a 34 year old P1EA4 at the time and had a hell of a time keeping up with all the young Punks, couldn't keep up with the swimming but had no trouble with the projects. I think that that was the best experience I ever had, looking back now the whole thing was if you ever got into a situation, stop and think, don't panic and think your way through, the best training ever.

After reading about all the new equipment in the Digest I would love to take a tour through the diving facilities where I took my initial course. We were one of the first courses to be issued our own wet suits, at the time was the latest, so we were told. This was great until I took my first requal and PO Goneau wanted to make us take his course in the old Wet suit. Fortunately while I was moaning and groaning my old buddy Gingras (the Bear) who I joined up with and played a lot of hockey with showed up and saved my backside. Needless to say my life was hell with my Instructor, before the first Stand Easy I was down at least 75 push-ups.

I enjoyed my experiences though as few as they were, I met a fantastic bunch of people. Now back to the reason of this note, I would love to have a tour of the Diving facilities and would like to know what or who I should contact to do so. I was going to get in touch with an old buddy who was an Electrician's mate with me, Al McRae but I lost my Address book, to see who was best contact to do so. Would appreciate any info. I know other Ships Divers in the area who would be also interested.

Andy Desrochers wrote: The Eastern Chapter has 87 members to date and hoping to reach our goal of 100 by next year REUNION.

On June 6 FDU (A) had a retirement party / dinner for LCDR Bill Lang at Shearwater Yacht Squadron and it was well attended with about 60 guests. Some 20 members represented our chapter.

On June 27 FDU (A) will have a change of command and our member LCDR Garry Reddy will take over as CO. All members are invited to the ceremony.

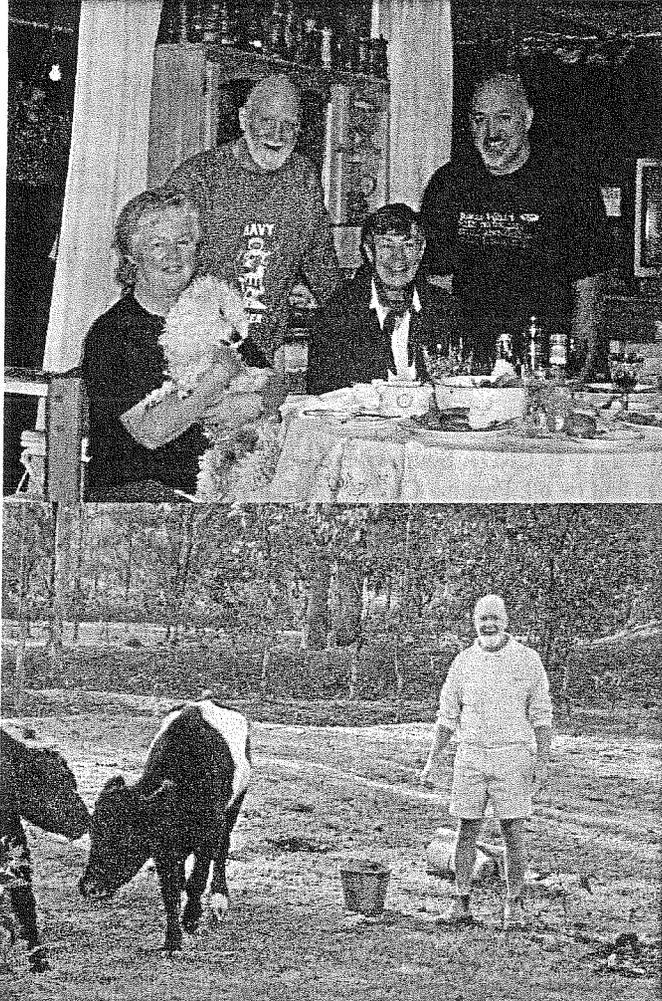
Darby Matthews is slowly progressing and is spending more " therapeutic time " with some our members.

A mid summer BBQ is in the planning stage and a date and location will be forthcoming.

We heard from Gilles Lariviere and he has his boat in the water and resumed his duties as Auxiliary Coast Guard in the St. Lawrence River. Watch out boaters, Gilles knows all the tricks.

## Visit to Norm and Judy Burt

L-R: Judy,  
Norm, Linda,  
George



A visit to Australia couldn't be complete without a visit to the only Aussie member of the CNDA. Norm for those who don't know him is a Canadian who left the RCN as a Lieutenant shortly after 1965. He took a bold move with his wife Judy and children and joined the Australian Navy.

The Burt's have enjoyed life in Australia and Norm attained the rank of Commodore before retiring to a 23-acre property in Grafton NSW. Norm quickly found out that he wasn't ready to retire and has set up a business from home. Commodore Conveyancing is company that transfers ownership of property during purchase. Norm has found a market and it is doing very well. Judy, their son and another worker also work from the office.

They introduced us to the Australian version of the Legion, Returning Serviceman Club. They have games rooms, gambling, social events and of course a bar and dining area. We also walked around their property watching the kangaroos enjoying the forested acreage. Norm has fruit trees of every type; lemon, grapefruit, mango, mandarin, cumquat, mulberry, macadamia and more that I can't remember. After sampling a variety Aussie wine with a BBQ supper it is a wonder I remember much.

The next day Norm was up early feeding the cattle. The land was quite dry and grass was sparse so he only has a few. Thanks again to Norm and Judy for a wonderful stay.

## X-Craft Master

LCDR John C. Ruse

John Ruse, born in Toronto in 1920, was in his last year of High School when WWII broke out. He wanted to join the Air Force right then and there to become a pilot, but his bush pilot father prevailed in getting him to graduate first. John figured he could get flight training easier by joining the Royal Canadian Navy and quickly transferring to the Royal Navy Fleet Air Arm, so he signed on with the RCN at Ottawa in 1940 as a Sub Lieutenant and was off to Royal Roads in Victoria, BC for his initial training.

He then spent 3 years in the Corvette HMCS PICTOU

and the Destroyer HMS BROADWAY escorting the Convoys across the North Atlantic. He finally arrived in England late in 1943 where he became an Instructor for a year on the Staff of Commodore (D), Western Approaches, teaching Escort personnel how to go about capturing and neutralizing U-boats and their crews.

At the age of 23, John applied for Submarine Service in X-craft as the crews of these Midget Submarines had to be young enough to thrive on dangerous assignments, yet mature and determined enough to win at all costs. He was accepted and proceeded to the Firth of Clyde in



## X-Craft Master (cont)

Scotland where the requisite training and trials/workups of the X-craft were conducted. The Commanding Officer immediately placed John on the roster of "Spare CO" for the training boat XT6 upon reviewing his time spent aboard HMS/M STRATAGEM – this made him one of the rare breed who became an X-craft CO even though he was technically not trained to be a submariner!

These small submarines had a diving lockout amidships known at the "Wet and Dry" compartments; it was flooded up to enable the Diver in the crew of four to exit underwater to cut through nets or other obstacles. The space served as the crew's escape compartment and also housed the single head. Escape training of the crew was done in the Loch, rather than in a training tank. This was found to be a most unpleasant exercise. The CO's primary task was navigating to the target, 1<sup>st</sup> Lieutenant's was depth keeping and trimming, while the Diver's was to handle the steering (which task was done by the 1<sup>st</sup> Lt when the Diver went on the outside of the boat). The fourth member was the Engineer.

A few months after requisite training, John took over as CO of the operational boat X21 and the training was relentless thereafter, from sunup to sundown, which would have been intolerable to most other personnel, but these courageous men thrived on it. Of course they let off steam regularly, either in the Mess, in the local Pubs or in London whenever they were able to travel down that way. As the training soon intensified further, rumours grew that another raid on the German Battleship TIRPITZ in a Norwegian Fjord was imminent, however the planned raid was cancelled, much to the disappointment of all the crews. John waited patiently for a new operational boat and in the spring of 1945 was elated to get XE8, which was then slated to go to the Far East. However, with the War drawing to a close, the whole operation was cancelled.

John felt it was pointless to stay with the Flotilla and applied for the position as Submarine Instruction Officer in Newfoundland. Admiral (S) disappointed John by informing him that he was unable to appoint him to this position as he had never completed the SOCT training, therefore was not technically classified as a submariner! John then became the Torpedo Officer aboard HMCS OTTAWA sailing for the Far East for the war in the Pacific, but arrived too late for any action there. He was shocked to see the state of the newly released Allied Prisoners of War held by the Japanese.

John was demobilized from the Navy in March 1946 upon their return to Canada, but rejoined the RCN in 1950 at HMCS STADACONA as Lt. Commander for the Korean War, taking up the position as Commanding Officer of the East Coast Diving Unit located at HMC DOCKYARD in Halifax. When the DEW Line (radar sites in the Arctic) was being built, John Ruse was appointed to the Icebreaker HMCS LABRADOR to organize beach clearing and other tasks for Divers to allow all building materials to be off loaded from ships to these various DEW Line sites.

He retired from the Navy at the end of 1955 and opened up a commercial diving company with Ken Alpine, operating out of the Niagara region in Ontario, with much work being done by retired CPO's John Brown and Bert Drake on the Welland Canal, among many others. John also did business with Saudi Arabia, building and shipping prefabricated houses. His final position before retiring for good in 1975, was as the Director of Marketing for Spar Aerospace – all in all quite a busy and satisfying life!

We see John and his good wife, Micky at the CNDA Reunions every three years, and we look forward to seeing you at the next one. John attends the Twelfth Submarine Flotilla regularly to see all his long time chums.

We are interested in your story... Please send it along to the Editor. If you don't think you are interesting enough, (which isn't true) write about a diving buddy, send in any interesting articles.

### Another Viagra Joke

Pfizer Corporation (PFE) is making the announcement today that Viagra will soon be available in liquid form, and will be marketed by Pepsi Cola as a power beverage suitable for use as-is or as a mixer, under the name "Mount and Do"

Pepsi's proposed ad campaign suggests, "It will now be possible for a man to literally pour himself a stiff one"

## Medical Nightmare - One more story

When you think you have heard all you want to hear about our ailing health care system you hear a story about one of our own divers. Bob MacKay shared this following story and if you have to go into our medical centres make sure you have both eyes open and if that isn't possible take someone that will ensure you get the care you need.

I just went through some major knee surgery on my bad leg (from my diving accident in 74). My leg gave out and I tore all of my quad tendons, tore a portion of my kneecap off, severed the lateral ligament so pretty well the only thing holding the bottom of my leg on was an outside ligament and the skin. Boy you want to talk about how badly things can go in a hurry, listen to this story.....on the morning of Friday, March 29, 2002 Easter weekend I fell and injured my right leg. I had to crawl to get help and was taken to the hospital by car - 911 is for sick people. I went to the Emergency Department of the General Campus of the Ottawa Hospital and after several long hours had x-rays taken of my knee. He was handed a splint - cost \$45.00, crutches- cost \$25.00 and told to call Tuesday to make an appointment to see an Orthopaedic Surgeon as the x-rays didn't show fractures but there was so much swelling they couldn't rule this out.

I didn't push the issue because it was extremely busy in Emergency and left but in hindsight I realized I was not told what care or precautions I should take regarding my leg injury. I had no desire to tolerate going back and waiting again, and was in too much pain and just wanted to go home and go to bed.

On Tuesday, April 2, 2002 I called to book an appointment with the Orthopaedic Surgeon and was told I could not get in to see the doctor until April 11<sup>th</sup>. I stated that this was not acceptable and explained that I couldn't walk, my knee was out of alignment, the swelling had not improved and the pain was intolerable. The secretary said that the only opening was April 11. I then phoned the Orthopaedic Surgeon's office (for which I had been given the 11 Apr appt) with hopes of further discussion with the Doctor, to, at the very least, get some direction for what to do / not to do, medications to take etc, until the 11<sup>th</sup> Apr appt. There was only a recorded greeting from the Doctor's secretary requesting a message to be left. There was no reply to this phone call message until the 5 Apr. (The 11 Apr appointment was cancelled that day in light of what follows, however I was subsequently phoned on 11 Apr and was advised

that I had in fact missed the 11 Apr appt). But back to the story - I then went to see my own GP (an ex-LCdr who took diving medicine in DCIEM) who immediately called the Doctor on call at the General Campus Emergency and he explained that it appeared that I had torn the ligaments, tendons and muscles around his knee and that my kneecap was out of alignment. The Doctor on call said for me to report to the General Emergency early Wednesday morning on 3 April and he would schedule me for surgery. This on call Doctor also indicated (based on the conversation with my GP) surgery should have been done within 24 hours of my fall. I was given a letter from my GP to give to the General Emergency Staff explaining the conversation with this Doctor on call and the GP told me to fast starting that night for his pending surgery.

Wednesday, April 3, I reported to the General Campus Emergency Department and handed in the letter from my GP to the staff. I was told they never heard of his GP or the Doctor my GP had been talking to (the name of the Doctor on call was spelled incorrectly but phonetically was correct). When I tried to explain my difficulties I was told that there was no point in perusing the conversation and that I had to again get in line and wait to be assessed by the staff and then by the Doctor on call. Again, only because of the congestion in Emergency I complied but called my GP again and told him of the difficulties I was encountering. The GP called Emergency and the delay being assessed by the Doctor on call seemed quicker than I had anticipated. When the Doctor saw my leg she expressed surprise at the appearance of my leg and stated that they would have to get x-rays. I told her that I had x-rays when I had last been to Emergency on 29 March. The doctor looked at these x-rays and the damage to the tissue was evident but I was told that they probably overlooked them because they had only been looking for a bone fracture. I was scheduled for surgery later that same day.

Unfortunately this ordeal does not end here. Following surgery (which was conducted after 24 hours of fasting) I was placed on pain medication via a pump that did not relieve the pain and only caused nausea and vomiting. I was eventually given pain tablets but was told I could not have the prescribed anti-inflammatory as it was a tablet and would add to the nausea and I would not be able to keep it down. On Friday, 5 April a Physiotherapist showed me how to use the stairs and said I would get me my own crutches and splint. I told him that I had al-

## Medical Nightmare (Cont)

ready bought them when I was in Emergency the previous Friday and the Therapist commented that if I had been an in-patient there would have been no charge for these items. I was given an Rx for the same medication that was not relieving my pain and a slip of paper with a follow-up appointment with the Orthopaedic Surgeon and discharged that same day. On discharge I asked to have a small bandage over my incision until I got home so that the splint and pant legs would not pull on the stitches and irritate the incision - I was concerned because the incision had been weeping slightly. Reluctantly the staff did put a light dressing over the area.

When I got home I was still in pain and of course found no relief from his Rx pain-killers and eventually tried Ibuprofen on my own, and for the first time

in a week was reasonably comfortable - a beer or two helped. When I went in for my next follow-up I was informed that had I not been operated on when I was I would have lost permanent use of my leg and quite likely would have lost my leg. So much for our medical system.

My sister (who is a retired head nurse from that hospital) was totally pissed off at the whole system, not necessarily the individuals, although some were questionably capable and she has written to just about every member of parliament (who can read), the head of the hospital and to a couple of local news papers. Don't know if it will do any good. I will certainly remember that in the future I (we) have to really look after ourselves, the Navy just isn't there to do it anymore.

## The Last Two Days Were The Longest

From Trident 1981

On 3 March, a team of four Canadian Forces clearance divers from Atlantic and Pacific diving units, HMCS CORMORANT and a team of military and scientific experts at Toronto's Defence and Civil Institute of Environmental Medicine (DCIEM) will conduct a two-week long saturation dive.

Code named SAT Dive 81, it is the first such experiment to be conducted by DND and marks the beginning of a series of experimental dives which will examine the physiological effects of the deep ocean environment on the diver.

The Canadian designed and built deep research facility is of great international interest as it has the deepest diving capability of any such facility in the world.

Built in Montreal by Canadian Vickers Ltd. at an initial cost of \$1.8 million, the facility comprises three chambers, one for living, one for working (water filled) and a transfer pod in between.

The chambers are surrounded by the intricate complexity of systems and control panels required to recreate the environment at ocean depths of up to 5600 feet.

The upcoming experiment has attracted

divers, engineers and diving medical officers from a number of allied nations, Germany, France, Britain, the United States and Norway, who will attend as observers.

Under the overall co-ordination of Lieutenant Commander Dick Lauckner, all extensive variety of physiological and equipment experiments will be conducted.

"The aim of this dive is to enhance man's ability to survive in the hyperbaric (greater than normal atmospheric pressure) environment," stated LCdr Lauckner.

Throughout the dive, each diver will be under constant physiological surveillance by the examining scientists. Continuously through the sleep period and frequently at work each man will be hooked up to various physiological monitors.

Asked about being locked up in the chambers for two weeks, team leader Petty Officer 1st Class Dirk van Ek, of HMCS CORMORANT commented, there is so much activity programmed during each day, there is no time for boredom."

"The challenge during the first few days is to become accustomed to the routine and for each of us to live as

C.N.D.A. Newsletter  
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Phone: 250-954-7296  
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Strength In Depth



DIPPER'S  
DIGEST  
Original by  
Alan Sagar

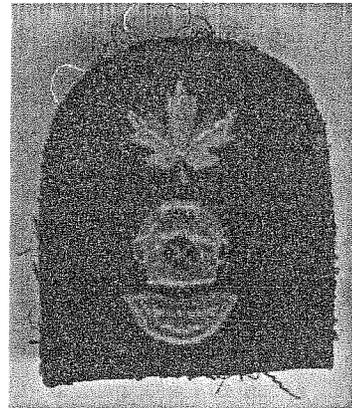
**Web Site! Try**  
<http://www.navy.gov.au/>

## Editor's Corner

The term Editor means one who edits manuscript, copy, etc., for publication. Editing is to correct and prepare for publication. Thank you to all the faithful writers that have given me some work. To the other majority who have a story that needs to be told but just can't get it put into any structure, put down something and send it in. I have a computer here that has spell check. Every diver I have ever know needs this. It corrects my spelling and grammar (to a certain point) and it can polish your story up too. So send me your letters, e-mail, photos.

The computer age has been bringing us a lot closer together. I currently have the e-mail addresses of about 60 divers. If you aren't in the grapevine please think about being added. I don't send junk mail but it is a way to keep in-touch.

We have a request from a badge collector who wants to know what this badge is. If you know please drop a line.



## The Last Two Days Were The Longest (Cont)

a team," he said.

Having been involved in a 10-day experiment to test the facility in 1979, PO1 van Ek admitted the last two days were the longest.

Among the equipment being tested are ultrasonic Doppler monitoring devices used to detect the dangerous gas bubbles which cause decompression sickness known as the Bends." The devices are designed to detect the before they harm the diver.

In addition, a Canadian developed self-contained breathing apparatus, designed by the Nova Scotia Research Foundation, a prominent contributor to the needs of the diving world, will be tested.

While there have been deeper dives," said LCdr Lauckner, "the results from this and future experiments will yield original and invaluable data on man's ability to live and work in the ocean. The results are available for use both by military divers and the civilian diving community."



Familiarity with equipment is essential for a two-week saturation dive. Suiting up for a pre-drill is PO1 Dirk van Ek. Assisting him are fellow divers LS Bill Burton (L) and LS Mike Atkinson. (CF Photo by Johnson)